



# Designing Instruction Aligned with Cognitive Psychology

## Course Syllabus

### Course Description

Cognitive psychology is the study of how people think and learn. Understanding principles of cognitive psychology can help teachers to design more effective instruction. This course explains various concepts from the field of cognitive psychology and how they apply to teaching. With this information (along with some concepts drawn from other fields), specific recommendations are given that can guide teachers' lesson planning, in-class teaching, and use of assessment.

This course enhances classroom teaching effectiveness and supports improved student outcomes by introducing new knowledge in cognitive psychology, equipping educators with evidence-based strategies for lesson planning, instruction, assessment, and classroom management.

### Course Objectives

At the end of this course you should be able to:

1. Define "learning," understand different types of knowledge, and understand the basics of cognitive load theory.
2. Understand how certain effective teaching practices are derived from cognitive load theory.
3. Understand implications for teaching from cognitive psychology research beyond cognitive load theory.
4. Understand the implications of cognitive psychology research for classroom management.
5. Understand what characteristics of curriculum are supported by cognitive psychology research.
6. Know and understand common "myths" about learning that do not align with research from cognitive psychology and other fields.
7. Understand common misconceptions derived from cognitive psychology research and understand how to identify high-quality education research.
8. Understand how cognitive psychology research fits together for coherent teaching, along with the limitations of research in cognitive psychology and other areas of education.

### Modules

- Module 1: Defining "Learning", Quiz 1
- Module 2: Using Cognitive Load Theory to Improve Teaching, Quiz 2



- Module 3: Other Important Findings from Cognitive Psychology, Quiz 3
- Module 4: Implications of Cognitive Psychology for Classroom Management, Quiz 4
- Module 5: Implications of Cognitive Psychology for Curriculum Design, Quiz 5
- Module 6: Neuromyths, Quiz 6
- Module 7: Misconceptions and Misapplications of Research, Quiz 7
- Module 8: Summary and Limitations of Research from Cognitive Psychology and other Education Fields, Quiz 8

### **Grading:**

Each quiz must be passed at an 80% or higher (three attempts allowed).

### **Format**

This is a self-paced, asynchronous (no required live meetings) course. Throughout the PD course, you will find it helpful to take notes along the way to assist with the quizzes. Within each module, you will find reflection assessments that are not graded but will help in your journey through the course. There is an interactive forum in the course to help you connect with peers and instructors, share ideas, and collaborate on best practices throughout your learning journey.